



Stantec Consulting Corporation
12034 134th Court NE, Suite 102
Redmond, WA 98052
Tel: (425) 298-1000
Fax: (425) 298-1020

RECEIVED

JAN 11 2010

**DEPT. OF ECOLOGY
TCP-NWRO**

Quarterly Groundwater Monitoring Report - Fourth Quarter 2009
ConocoPhillips Facility No. 255028 (RM&R #01344)
Washington Department of Ecology Voluntary Cleanup Program ID #NW1290
247 D Street
Blaine, Washington

Stantec Project No.:
212301494

Submitted to:
Ms. Jing Liu
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

Submitted by:
Stantec Consulting Corporation
12034 134th Court NE, Suite 102
Redmond, WA 98052

Prepared on behalf of:
ConocoPhillips Company

January 7, 2010

Dear Ms. Liu:

Stantec Consulting Corporation (Stantec) is pleased to present this quarterly groundwater monitoring report to the Washington State Department of Ecology (DOE) Voluntary Cleanup Program (VCP) on behalf of the ConocoPhillips Company (ConocoPhillips). This report describes the results of groundwater monitoring activities performed by Stantec during the Fourth Quarter of 2009 (the reporting period) at ConocoPhillips Facility No. 255028 (RM&R #01344; VCP #NW1290) located at 247 D Street in Blaine, Washington (the Site).

GROUNDWATER MONITORING ACTIVITIES

Groundwater monitoring activities during the reporting period were performed on December 8, 2009. Groundwater monitoring activities were performed in accordance with Stantec's protocols for groundwater monitoring events (Attachment A).

Seven groundwater monitoring wells were gauged (MW-1, MW-2A, MW-3, MW-4, and MW-6 through MW-8) and four groundwater monitoring wells (MW-3, MW-4, MW-7, and MW-8) were sampled. These activities are described below.

Monitoring Well Gauging

Seven groundwater monitoring wells were gauged: MW-1, MW-2A, MW-3, MW-4, and MW-6 through MW-8. Monitoring wells were gauged for the presence of liquid phase hydrocarbons (LPH) and depth-to-groundwater prior to purging and sampling. LPH was not measured in the groundwater monitoring wells at thicknesses greater than or equal to 0.01 feet. The depth-to-groundwater ranged from 1.70 feet (MW-2A) to 4.80 feet (MW-1) below the top of casing (TOC). Depth-to-groundwater data was used to calculate the groundwater elevation in each well and evaluate the groundwater flow direction and gradient. Historical groundwater gauging data and gauging data from the reporting period are summarized in Table 1. Well locations and groundwater flow direction are shown on Figure 1. Based on these data, the inferred groundwater flow directions are to the southwest and southeast away from an apparent recharge area in the north central portion of the site and at an approximate gradient of 0.01 feet per foot (ft/ft).

Monitoring Well Purging

Wells intended to be sampled were purged after gauging. Groundwater was purged from the wells using low-flow methods, which included using a peristaltic pump and dedicated polyethylene tubing. Water quality parameters were measured during purging and recorded on

field data sheets (Attachment B). Purged groundwater and rinsate/decontamination water were stored on site in a Department of Transportation (DOT)-approved, steel drum pending laboratory characterization and off site disposal.

Monitoring Well Sampling

Following purging operations, groundwater samples were collected using a peristaltic pump and placed directly into pre-cleaned sample containers provided by an independent laboratory.

Once the sample containers were filled and sealed, they were labeled with the pertinent sampling information, and placed on ice in an insulated cooler for delivery under chain-of-custody documentation to an independent laboratory.

CHEMICAL ANALYSES AND RESULTS

Chemical Analyses

Groundwater samples collected during the reporting period were submitted to Pace Analytical Services, Inc. (Pace) in Seattle, Washington for the following chemical analyses:

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary-butyl ether (MTBE) and halogenated volatile organic compounds (HVOCs) using Environmental Protection Agency (EPA) Method 8260B.

Chemical analyses results are described below. A copy of the certified laboratory analytical report and chain-of-custody documentation from Pace are included in Attachment C.

Chemical Analyses Results

Historical chemical analyses results and those from the reporting period are summarized in Table 1. Analytical results for TPH-G, TPH-D, TPH-O, BTEX, MTBE, and select HVOCs are illustrated on Figure 2.

A summary of the analytical results exceeding Model Toxics Control Act (MTCA) Method A cleanup levels is provided below. Analytical results not described below did not exceed MTCA Method A cleanup levels.

- Vinyl chloride was detected in MW-7 and MW-8 at concentrations of 2.1 and 0.31 micrograms per liter ($\mu\text{g/L}$), respectively, which exceed the MTCA Method A cleanup

level of 0.2 µg/L. These results are generally consistent with data from other recent groundwater monitoring events.

It should be noted that cis-1,2-Dichloroethene (cis-1,2-DCE) was detected in MW-4, MW-7, and MW-8 at concentrations of 11.1, 1.4 and 6.7 µg/L, respectively. There is no default MTCA Method A cleanup level for cis-1,2-DCE.

Laboratory Quality Assurance/Quality Control (QA/QC)

A copy of the analytical report for the samples collected during the reporting period is included in Appendix C. Please refer to the analytical report for a description of QA/QC methods and potential concerns (if any) that were identified during chemical analysis.

WASTE DISPOSAL

Purge and rinsate water generated during the monitoring and sampling event were temporarily stored on site in a labeled, DOT-approved, steel drum. The drum and its contents will be transported off-site to a licensed disposal or recycling facility by a licensed ConocoPhillips-approved vendor. A copy of the signed waste manifest or other disposal documentation will be provided under a separate cover.

CONCLUSIONS

Concentrations of vinyl chloride in MW-7 and MW-8 exceeded the MTCA Method A cleanup levels. Cis-1,2-DCE was detected in MW-4, MW-7, and MW-8; however, there is no default MTCA Method A cleanup level for cis-1,2-DCE. The reported results are generally consistent with data from other recent groundwater monitoring events.

LIMITATIONS AND CERTIFICATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of ConocoPhillips Company for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this

Stantec

Quarterly Groundwater Monitoring Report - Fourth Quarter 2009

January 7, 2010

information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigations. No other warranties, expressed or implied are made by Stantec.

Prepared by:

Tammy Parise

Tammy Parise

Staff Scientist

Reviewed by:

Jeffrey S. Thompson
Jeffrey S. Thompson, L.G., P.E.G.
Principal Geologist



ATTACHMENTS

Figure 1 Site Plan with Groundwater Elevations (December 8, 2009)

Figure 2 Site Plan with Analytical Results (December 8, 2009)

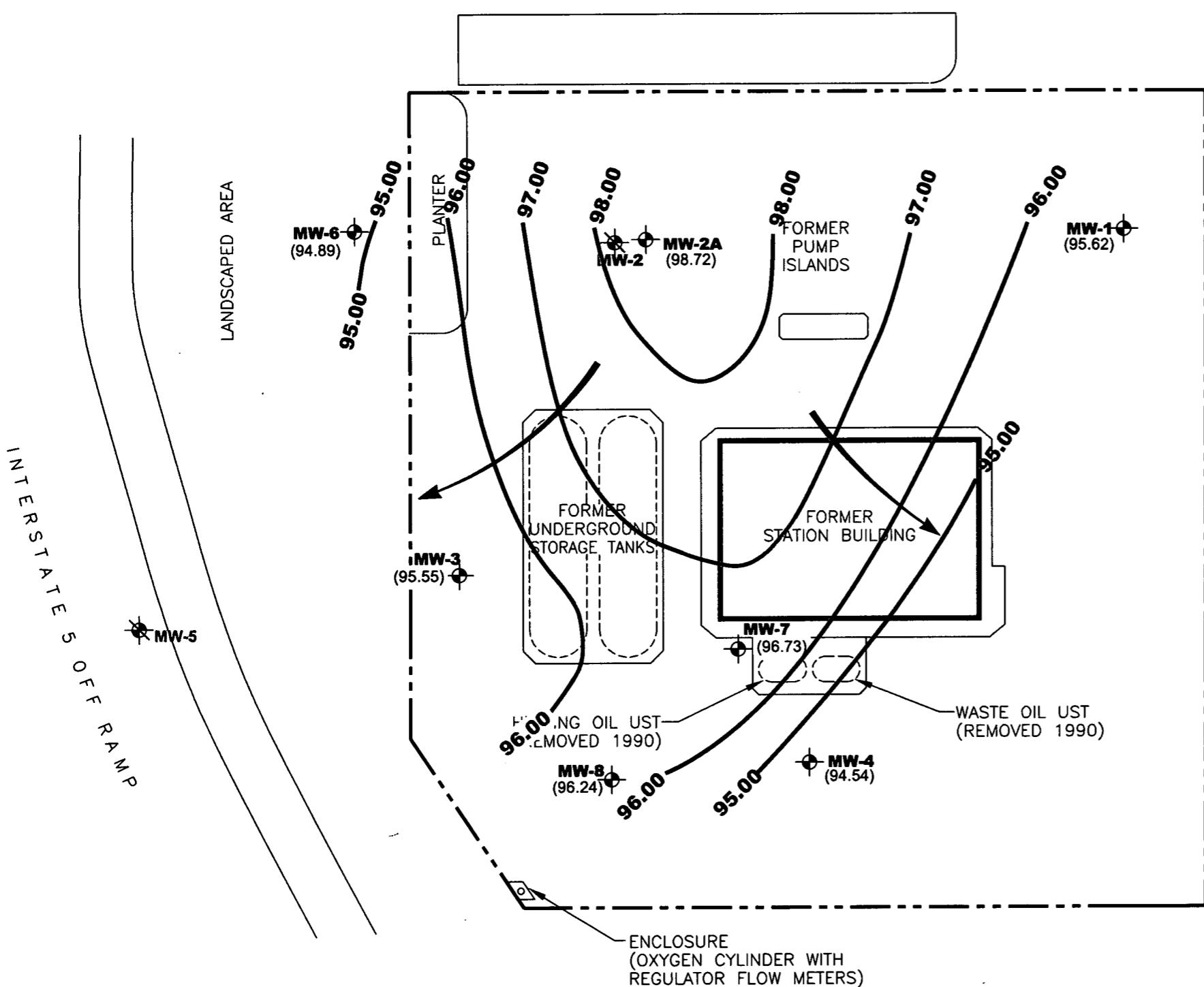
Table 1 Cumulative Summary of Groundwater Elevations and Sample Analytical Results

Attachment A Field and Laboratory Procedures

Attachment B Field Data Sheets

Attachment C Certified Laboratory Analytical Report and Chain-of-Custody Documentation

D STREET

**LEGEND**

- SITE BOUNDARY:** Dashed line.
- MW-1:** Monitoring well location and ID.
- MW-2:** Destroyed or abandoned monitoring well location and ID.

GROUNDWATER

- (95.62) Groundwater elevation (feet).
- ← Inferred groundwater flow direction.
- 96.00 — Groundwater elevation contour (feet).
- Contour interval = 1.00 ft.

NOTE:

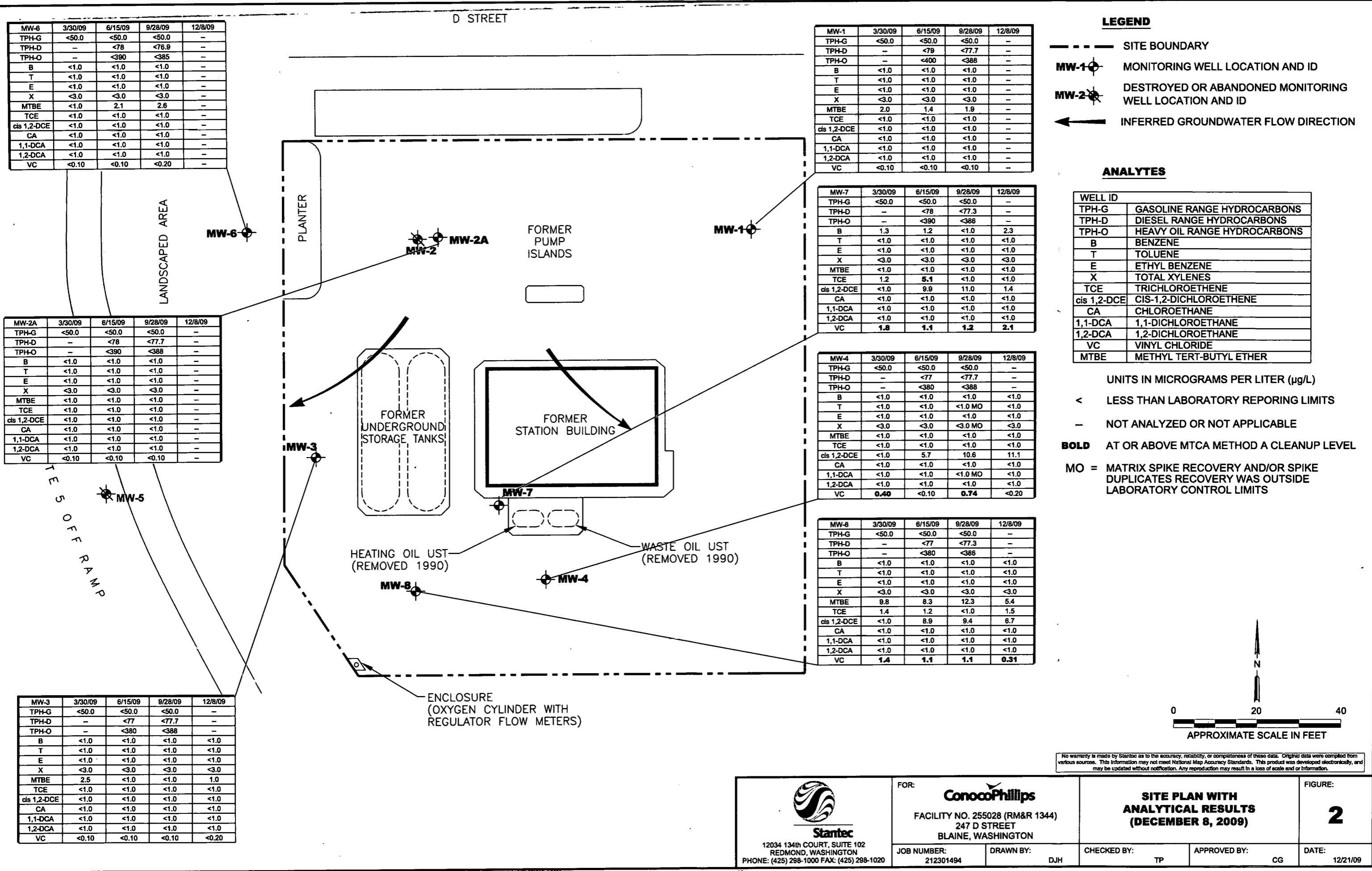
- 1). All locations are approximate.

0 20 40

APPROXIMATE SCALE IN FEET

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.

 Stantec 12034 134th COURT, SUITE 102 REDMOND, WASHINGTON PHONE: (425) 298-1000 FAX: (425) 298-1020	FOR: ConocoPhillips FACILITY NO. 255028 (RM&R 1344) 247 D STREET BLAINE, WASHINGTON <hr/> JOB NUMBER: 212302228 DRAWN BY: DJH CHECKED BY: TP APPROVED BY: CG DATE: 12/21/09	SITE PLAN WITH GROUNDWATER ELEVATIONS (DECEMBER 8, 2009)	FIGURE: 1
---	--	---	------------------



ATTACHMENT A
FIELD AND LABORATORY PROCEDURES

STANTEC MONITORING WELL GAUGING, PURGING AND SAMPLING PROCEDURES

Monitoring well purging and sampling was conducted based on USEPA approved (Puls and Barcelona, 1996) low-flow sampling techniques whenever possible.

Purging Procedures

- A. Using a decontaminated instrument (i.e., tape measure, continuity meter, or interface probe) measure the depth to groundwater in reference to the measuring point at the top of the casing. Measure the total depth of the well and diameter of the well casing to calculate the volume of water in the well casing.
- B. Based on previously obtained data, if a monitoring well is suspected of containing LPH concentrations, lower a transparent bailer into the well to evaluate the presence of a hydrocarbon sheen on the water table.
- C. Decontaminate the purge pump and/or PVC bailers by scrubbing in Alconox detergent solution, followed by a tap water rinse and then a de-ionized water rinse.
- D. Purge by low-flow pumping (less than 0.5 liters per minute) for approximately five minutes. Monitor the static water level in the well using a decontaminated instrument and adjust the pumping rate to maintain a minimal drawdown. If low-flow purging is not possible and bailing is used to purge the well, then a minimum of three well volumes will be removed. When purging 3 well volumes, parameters should be measured after each casing volume is removed. If the well goes dry, the procedure listed in step E2 (below) should be followed.
- E. Conduct field measurements (i.e., pH, specific conductivity, temperature, and oxidation-reduction potential) note clarity, color, turbidity, and odor of purge water, and measure depth to groundwater.
 1. If the well has not been purged dry and drawdown is minimal, continue to pump and conduct field measurements (including depth to water) again every three to five minutes during purging.
 - a) If the first through third series of measurements vary by less than 10 percent, the well has been adequately purged. If bailers are used to purge the well, then the water level is allowed to recover to 80 percent of its static condition, or for two hours, whichever comes first prior to beginning the sampling procedure.
 - b) If the measurements vary by 10 percent or greater, repeat Step E1 above.
 - c) If a minimum of three parameters cannot be measured during purging and or drawdown cannot be controlled to minimal, remove three well volumes with a bailer prior to sampling.
 2. If the well has been purged dry, measure the water level and allow the well to recharge to 80 percent, or for two hours, whichever occurs first. Calculate the percent recovery, and begin the sampling procedure.

Sampling Procedures

- Use the pump and a clean, dedicated section of tubing to collect the groundwater sample from the screened interval of the water column. If the pump cannot be used, collect the water sample with a clean, dedicated polyethylene disposable bailer.
- Transfer the groundwater sample into the appropriate container(s). Where applicable, some containers are completely filled to achieve zero headspace. Label the samples according to location and date of collection.
- Enter the samples into Chain-of-Custody and preserve on ice until delivery to the analytical laboratory. Complete the Well Development or Purging/Sampling Log to be stored in the project file.

Reference:

Puls, R.W., and Barcelona M.J., 1996. EPA Ground Water Issue Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, EPA/540/S-95/504.

ATTACHMENT B
FIELD DATA SHEETS

SITE VISITATION REPORT
4Q09 - CP 255028 (RM&R 01344) Blaine, Washington

Name(s) D. Reitz Date: 12/8/09 Time of Arrival Call-In: 1220
Arrival Time: 1220 Departure Time: 1630 Time of Departure Call-In: 1630
Who did you call? T. Parisi

DRUM INVENTORY

<u>1</u>	WATER	<u> </u>	CARBON	<u> </u>	TOTAL OPEN TOP	<u>1</u>
	SOIL	<u> </u>	EMPTY	<u> </u>	TOTAL BUNG TOP	<u> </u>

HEALTH AND SAFETY ASSESSMENT

Don P. P. E.

Review HAASP & TSA
Set-up Decon. "station"

1225 Check-in with site-contact

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

- 1220 Arrive on job site. Call-in to office. Set-up decon. station & perform tailgate safety meeting. Dep P.P.E.
1225 Initiate gauging of physical measurements of 4009 GWM wells, prior to 4009 GWM sample procedures.
1320 Complete gauging procedures & initiate 4009 GWM sample procedures (sample 4 gwm. w/lls).
1520 Complete 4009 GWM sample procedures. Decon. equipment and release purge water/decon. rinsates into staged drum. Label drums.
1540 Pack sample coolers & load equipment into truck.
1600 Complete daily documentation & call-in to office.
1630 Purchase ice. Check-out with site-contact.
Depart job site.

D. Reitz

12/8/09

Stantec International Incorporated

HYDROLOGIC DATA SHEET

Gauge Date: 12/08/09

Project Name: CP RM&R 1344 Blaine

Field Technician: David Reitz

Project Number: 212301494

DTP = Depth to Free Product (FP or NAPH) Below TOC
 DTW = Depth to Groundwater Below TOC
 DTB = Depth to Bottom of Well Casing Below TOC

Flow through cell calibrated Y X N

Wells checked for product and gauged prior to commencement of bailing or purging the wells Y X N

WELL OR LOCATION	WELL SCREEN DEPTH	PROPOSED INTAKE RANGE (feet below TOC)	MEASUREMENTS				PURGE? (Y/N)	SHEEN? (Y/N)	SAMPLE? (Y/N)	COMMENTS / PROBE CALIBRATION
			TIME	DTP (feet)	DTW (feet)	DTB (feet)				
MW-1		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1240	—	4.80	12.40	N	N	Y	
MW-2A		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1230	—	1.70	14.30	N	N	Y	
MW-3		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1250	—	3.02	12.40	Y	N	Y	
MW-4		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1300	—	2.99	12.30	Y	N	Y	
MW-6		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1225	—	2.95	15.00	N	N	Y	
MW-7		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1310	—	1.78	12.80	Y	N	Y	
MW-8		Within the top half of the encountered water column. Top of screen interval if DTW < Depth to Screen.	1320	—	2.73	12.70	Y	N	Y	

Stantec Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #:	212301494	PURGED BY:	DR	WELL I.D.:	MW - 3
CLIENT NAME:	COP	SAMPLED BY:	DR	SAMPLE I.D.:	MW - 3
LOCATION:	247 D Street, Blaine, WA				

DATE PURGED	12/8/09	START (2400hr)	1325	END (2400hr)	1350		
DATE SAMPLED	12/8/09	SAMPLE TIME (2400hr)	1340	LOW-FLOW USED	<input checked="" type="checkbox"/>		
SAMPLE TYPE:	Groundwater <input checked="" type="checkbox"/>	Surface Water		Treatment Effluent			
CASING DIAMETER:	2" <input checked="" type="checkbox"/>	3" <input type="checkbox"/>	4" <input type="checkbox"/>	5" <input type="checkbox"/>	6" <input type="checkbox"/>	8" <input type="checkbox"/>	Other <input type="checkbox"/>

Casing Volume: (liters per foot) (0.64) (1.44) (2.45) (3.86) (5.68) (9.84) ()

DEPTH TO BOTTOM (feet) =	12.40
DEPTH TO WATER (feet) =	3.02
WATER COLUMN HEIGHT (feet) =	9.38
ACTUAL PURGE (L) =	2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ML	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
12/8/09	1330	800	9.4	0.232	5.27	clr
	1333	500	9.2	0.226	5.20	clr
	1336	500	9.2	0.221	5.21	clr
	1339	500	9.5	0.220	5.23	clr

Calculated Variance of Final Three Samples: 0.3 Acceptable Variance Limits: $\leq 10\%$ $\leq 3\%$ ≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE:	7.00	SAMPLE DTW:	3.48
-------------------------------------	------	-------------	------

ANTICIPATED PURGE INTAKE DEPTH:	7.00	ANALYSES:	HVOCS BTEX MTBE
---------------------------------	------	-----------	-----------------------

SAMPLE VESSEL / PRESERVATIVE:

PURGING EQUIPMENT: Horiba Water meter Peristaltic pump Interface probe	SAMPLING EQUIPMENT: Peristaltic pump
--	---

Flow Through Cell Disconnected Prior to Sample Collection?: YES NO

WELL PAD CONDITION: Fair WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair SEAL PRESENT? Yes BOLTS PRESENT? Yes

WELL INTEGRITY: Fair WELL TAG: Yes LOCK#: Yes

REMARKS: _____

SIGNATURE:  Page 1 of 1

Stantec Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301494 PURGED BY: DR WELL I.D.: M (1) - 4
 CLIENT NAME: COP SAMPLED BY: DR SAMPLE I.D.: MW - 4
 LOCATION: 247 D Street, Blaine, WA

DATE PURGED 12/8/09 START (2400hr) 1355 END (2400hr) 1420
 DATE SAMPLED 12/8/09 SAMPLE TIME (2400hr) 1410 LOW-FLOW USED X
 SAMPLE TYPE: Groundwater X Surface Water Treatment Effluent Other

CASING DIAMETER: 2" X 3" 4" 5" 6" 8" Other
 Casing Volume: (liters per foot) (0.64) (1.44) (2.45) (3.86) (5.68) (9.84) ()

DEPTH TO BOTTOM (feet) = 12.30
 DEPTH TO WATER (feet) = 2.99
 WATER COLUMN HEIGHT (feet) = 9.31 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (ML)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
12/8/09	1400	500	9.9	0.291	5.42	Cl+
	1403	500	9.8	0.287	5.41	Cl+
	1406	500	9.8	0.286	5.42	Cl+
V	1409	500	9.8	0.287	5.42	Cl+
<i>Draft 12/8/09</i>						
12/8/09						

Calculated Variance of Final Three Samples: 0 Acceptable Variance Limits: 0.001 ± 10% 0.01 ± 3% 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 7.00 SAMPLE DTW: 3.58

ANTICIPATED PURGE INTAKE DEPTH: 7.00 ANALYSES: HVOCS
 BTEX
 MTBE

SAMPLE VESSEL / PRESERVATIVE:

PURGING EQUIPMENT: Hot water meter Peristaltic pump Interface probe	SAMPLING EQUIPMENT: Peristaltic pump
---	---

Flow Through Cell Disconnected Prior to Sample Collection?: YES X NO

WELL PAD CONDITION: Fair WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair SEAL PRESENT?: Yes BOLTS PRESENT?: Yes

WELL INTEGRITY: Fair WELL TAG: Yes LOCK#: Yes

REMARKS:

SIGNATURE:  Page 1 of 1

Stantec Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301494

PURGED BY: DR

WELL I.D.: M W - 8

CLIENT NAME: COP

SAMPLED BY: DR

SAMPLE I.D.: M W - 8

LOCATION: 247 D Street, Blaine, WA

DATE PURGED 12/8/09 START (2400hr) 1420 END (2400hr) 1445
DATE SAMPLED 12/8/09 SAMPLE TIME (2400hr) 1435 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water Treatment Effluent Other

CASING DIAMETER: 2" X 3" (1.44) 4" (2.45) 5" (3.86) 6" (5.68) 8" (9.84) Other ()

DEPTH TO BOTTOM (feet) = 12.70

DEPTH TO WATER (feet) = 2.73

WATER COLUMN HEIGHT (feet) = 9.97

ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ML	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
12/8/09	1425	600	7.3	0.346	5.63	Cr
	1428	500	7.9	0.341	5.50	Cr
	1431	500	8.7	0.335	5.47	Cr
	1434	500	8.8	0.332	5.49	Cr
					12/8/09	

Calculated Variance of Final Three Samples:

0.9

0.011

0.03

Acceptable Variance Limits:

≤ 10%

≤ 3%

≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 8.00 SAMPLE DTW: 3.00

ANTICIPATED PURGE INTAKE DEPTH: 8.00 ANALYSES: HVOCS
BTEX
MTBE

SAMPLE VESSEL / PRESERVATIVE:

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Horiba water meter Peristaltic pump Interface probe	Peristaltic pump

Flow Through Cell Disconnected Prior to Sample Collection?: YES X NO

WELL PAD CONDITION: Fair

WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair

SEAL PRESENT?: Yes

BOLTS PRESENT?: Yes

WELL INTEGRITY: Fair

WELL TAG: Yes

LOCK#: Yes

REMARKS:

SIGNATURE: 

Page 1 of 1

Stantec Consulting Corporation

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 212301494

PURGED BY: DR

WELL I.D.: M(1) - 7

CLIENT NAME: COP

SAMPLED BY: DR

SAMPLE I.D.: M(1) - 7

LOCATION: 247 D Street, Blaine, WA

DATE PURGED 12/8/09 START (2400hr) 1450 END (2400hr) 1520

DATE SAMPLED 12/8/09 SAMPLE TIME (2400hr) 1505 LOW-FLOW USED X

SAMPLE TYPE: Groundwater X Surface Water Treatment Effluent Other

CASING DIAMETER: 2" X 3" (0.64) 4" (1.44) 5" (2.45) 6" (3.86) 8" (5.68) Other ()

DEPTH TO BOTTOM (feet) = 12.80

DEPTH TO WATER (feet) = 1.78

WATER COLUMN HEIGHT (feet) = 11.02 ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ML	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
12/8/09	1455	800	8.2	0.422	5.63	clr
	1458	500	9.1	0.411	5.69	clr
	1501	500	9.7	0.405	5.76	clr
↓	1504	500	10.0	0.402	5.79	clr

12/8/09

Calculated Variance of Final Three Samples: 0.9 Acceptable Variance Limits: ≤ 10% ≤ 3% ≤ 0.1

DEPTH TO PURGE INTAKE DURING PURGE: 8.00 SAMPLE DTW: 1.80

ANTICIPATED PURGE INTAKE DEPTH: 8.00 ANALYSES: HVOCS
BTEX
MTBE

SAMPLE VESSEL / PRESERVATIVE:

PURGING EQUIPMENT: <i>Hori. water meter</i>	SAMPLING EQUIPMENT: <i>Peristaltic pump Interface probe Peristaltic pump</i>
--	---

Flow Through Cell Disconnected Prior to Sample Collection?: YES X NO

WELL PAD CONDITION: Fair

WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair

SEAL PRESENT? Yes

BOLTS PRESENT? Yes

WELL INTEGRITY: Fair

WELL TAG: Yes

LOCK#: Yes

REMARKS:

SIGNATURE: *Dave PT*

Page 1 of 1

Chain Of Custody Record

Pace Analytical Laboratories 940 S. Harney Street, Seattle WA (206) 767-5063		INVOICE REMITTANCE ADDRESS: Stantec Attn: Chris Gdak 12034 134th Court NE Suite Redmond, WA 98052		Purchase Order #		DATE: <u>12/08/09</u> PAGE: <u>1</u> of <u>1</u>			
				ConocoPhillips AOC# <u>01344</u>					
SAMPLING COMPANY: Stantec		Valid Value ID: 255028		CONOCOPHILLIPS SITE NUMBER 255028		GLOBAL ID NO.:			
ADDRESS: 12034 134th Court NE, Suite 102, Redmond, WA 98052		SITE ADDRESS (Street and City): 247 D Street, Blaine, WA		ConocoPhillips Manager Myron Smith					
PROJECT CONTACT (Hardcopy or PDF Report to): Chris Gdak		EDF DELIVERABLE TO (RP or Designee):		PHONE NO.:		E-MAR:	LAB USE ONLY		
TELEPHONE: (425) 298-1023	FAX: (425) 298-1020	E-MAIL: chris.gdak@stantec.com							
SAMPLER NAME(S) (Print): <u>David Reitz</u>	CONSULTANT PROJECT NUMBER 212301494		REQUESTED ANALYSES						
TURNAROUND TIME (CALENDAR DAYS): <input checked="" type="checkbox"/> 14 DAYS <input type="checkbox"/> 7 DAYS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS								FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED <input checked="" type="checkbox"/>									
* Field Point name only required if different from Sample ID									
Field Point Name	Sample ID	SAMPLING		MATRIX	NO. OF CONT.			TEMPERATURE ON RECEIPT C°	
		DATE	TIME			HVOCS by 3260B	BTEX by 3260B	MTBE by 3260B	
MW-3	MW-3	<u>12/08/09</u>	<u>1340</u>	GW	6	X	X	X	
MW-4	MW-4	<u>"</u>	<u>1410</u>	GW	6	X	X	X	
MW-7	MW-7	<u>"</u>	<u>1505</u>	GW	6	X	X	X	
MW-8	MW-8	<u>"</u>	<u>1435</u>	GW	6	X	X	X	
---	TB				6	X	X	X	
Reinforced by: (Signature) <u>Jenny Parise</u>		Received by: (Signature) <u>J</u>						Date: <u>12/10/09</u>	Time: <u>9:30</u>
Reinforced by: (Signature)		Received by: (Signature) <u>Jenny Gross/Parise</u>						Date: <u>12/10/09</u>	Time: <u>10:00</u>
Reinforced by: (Signature)		Received by: (Signature)						Date:	Time:

9/10/03 Revision

ATTACHMENT C
CERTIFIED LABORATORY ANALYTICAL REPORT
AND CHAIN-OF-CUSTODY DOCUMENTATION

December 17, 2009

Chris Gdak
Stantec
12034 134th Ct NE, Suite 102
Redmond, WA 98052

RE: Project: 01344 - Blaine
Pace Project No.: 252638

Dear Chris Gdak:

Enclosed are the analytical results for sample(s) received by the laboratory on December 10, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

One of six VOA vials were received broken. Four of six VOA vials were received out of EPA compliance for head space. The client was notified via email on 12/10/09.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross

jennifer.gross@pacelabs.com
Project Manager

Enclosures

cc: Andrea Donnell, COP_Stantec Washington
Tammy Parise, COP_Stantec Washington
Linda Rawlins, COP_Stantec Oregon

REPORT OF LABORATORY ANALYSIS

Page 1 of 12

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



CERTIFICATIONS

Project: 01344 - Blaine
Pace Project No.: 252638

Washington Certification IDs

940 South Harney Street Seattle, WA 98108
Washington Certification #: C1229
Oregon Certification #: WA200007
Alaska CS Certification #: UST-025

California Certification #: 01153CA
Alaska Drinking Water Micro Certification #: WA01230
Alaska Drinking Water VOC Certification #: WA01-09
Florida/NELAP Certification #: E87617

REPORT OF LABORATORY ANALYSIS

Page 2 of 12

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



SAMPLE ANALYTE COUNT

Project: 01344 - Blaine
 Pace Project No.: 252638

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
252638001	MW-3	EPA 5030B/8260	LNH	39	PASI-S
252638002	MW-4	EPA 5030B/8260	LNH	39	PASI-S
252638003	MW-7	EPA 5030B/8260	LNH	39	PASI-S
252638004	MW-8	EPA 5030B/8260	LNH	39	PASI-S
252638005	TB	EPA 5030B/8260	LNH	39	PASI-S

REPORT OF LABORATORY ANALYSIS

Page 3 of 12

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc..



ANALYTICAL RESULTS

Project: 01344 - Blaine
Pace Project No.: 252638

Sample: MW-7	Lab ID: 252638003	Collected: 12/08/09 15:05	Received: 12/10/09 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
1,1,2-Trichloroethane	ND ug/L		1.0	1		12/11/09 12:56	79-00-5	
1,1-Dichloroethane	ND ug/L		1.0	1		12/11/09 12:56	75-34-3	
1,1-Dichloroethene	ND ug/L		1.0	1		12/11/09 12:56	75-35-4	
1,2-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 12:56	95-50-1	
1,2-Dichloroethane	ND ug/L		1.0	1		12/11/09 12:56	107-06-2	
1,2-Dichloropropane	ND ug/L		1.0	1		12/11/09 12:56	78-87-5	
1,3-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 12:56	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 12:56	106-46-7	
Benzene	2.3 ug/L		1.0	1		12/11/09 12:56	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		12/11/09 12:56	75-27-4	
Bromoform	ND ug/L		1.0	1		12/11/09 12:56	75-25-2	
Bromomethane	ND ug/L		1.0	1		12/11/09 12:56	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		12/11/09 12:56	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		12/11/09 12:56	108-90-7	
Chloroethane	ND ug/L		1.0	1		12/11/09 12:56	75-00-3	
Chloroform	ND ug/L		1.0	1		12/11/09 12:56	67-66-3	
Chloromethane	ND ug/L		1.0	1		12/11/09 12:56	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		12/11/09 12:56	124-48-1	
Ethylbenzene	ND ug/L		1.0	1		12/11/09 12:56	100-41-4	
Methyl-tert-butyl ether	ND ug/L		1.0	1		12/11/09 12:56	1634-04-4	
Methylene chloride	ND ug/L		4.0	1		12/11/09 12:56	75-09-2	
Tetrachloroethene	ND ug/L		1.0	1		12/11/09 12:56	127-18-4	
Toluene	ND ug/L		1.0	1		12/11/09 12:56	108-88-3	
Trichloroethene	ND ug/L		1.0	1		12/11/09 12:56	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		12/11/09 12:56	75-69-4	
Vinyl chloride	2.1 ug/L		0.20	1		12/11/09 12:56	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		12/11/09 12:56	1330-20-7	
cis-1,2-Dichloroethene	1.4 ug/L		1.0	1		12/11/09 12:56	156-59-2	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		12/11/09 12:56	10061-01-5	
m&p-Xylene	ND ug/L		2.0	1		12/11/09 12:56	1330-20-7	
o-Xylene	ND ug/L		1.0	1		12/11/09 12:56	95-47-6	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/11/09 12:56	156-60-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		12/11/09 12:56	10061-02-6	
4-Bromofluorobenzene (S)	102 %		80-120	1		12/11/09 12:56	460-00-4	
Dibromofluoromethane (S)	109 %		80-122	1		12/11/09 12:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	112 %		80-124	1		12/11/09 12:56	17060-07-0	
Toluene-d8 (S)	106 %		80-123	1		12/11/09 12:56	2037-26-5	

Sample: MW-8	Lab ID: 252638004	Collected: 12/08/09 14:35	Received: 12/10/09 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
1,1,1-Trichloroethane	ND ug/L		1.0	1		12/11/09 13:16	71-55-6	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		12/11/09 13:16	79-34-5	
1,1,2-Trichloroethane	ND ug/L		1.0	1		12/11/09 13:16	79-00-5	

Date: 12/17/2009 12:56 PM

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 6 of 12



ANALYTICAL RESULTS

Project: 01344 - Blaine
Pace Project No.: 252638

Sample: MW-8	Lab ID: 252638004	Collected: 12/08/09 14:35	Received: 12/10/09 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
1,1-Dichloroethane	ND ug/L		1.0	1		12/11/09 13:16	75-34-3	
1,1-Dichloroethene	ND ug/L		1.0	1		12/11/09 13:16	75-35-4	
1,2-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 13:16	95-50-1	
1,2-Dichloroethane	ND ug/L		1.0	1		12/11/09 13:16	107-06-2	
1,2-Dichloropropane	ND ug/L		1.0	1		12/11/09 13:16	78-87-5	
1,3-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 13:16	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 13:16	106-46-7	
Benzene	ND ug/L		1.0	1		12/11/09 13:16	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		12/11/09 13:16	75-27-4	
Bromoform	ND ug/L		1.0	1		12/11/09 13:16	75-25-2	
Bromomethane	ND ug/L		1.0	1		12/11/09 13:16	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		12/11/09 13:16	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		12/11/09 13:16	108-90-7	
Chloroethane	ND ug/L		1.0	1		12/11/09 13:16	75-00-3	
Chloroform	ND ug/L		1.0	1		12/11/09 13:16	67-66-3	
Chloromethane	ND ug/L		1.0	1		12/11/09 13:16	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		12/11/09 13:16	124-48-1	
Ethylbenzene	ND ug/L		1.0	1		12/11/09 13:16	100-41-4	
Methyl-tert-butyl ether	5.4 ug/L		1.0	1		12/11/09 13:16	1634-04-4	
Methylene chloride	ND ug/L		4.0	1		12/11/09 13:16	75-09-2	
Tetrachloroethene	ND ug/L		1.0	1		12/11/09 13:16	127-18-4	
Toluene	ND ug/L		1.0	1		12/11/09 13:16	108-88-3	
Trichloroethene	1.5 ug/L		1.0	1		12/11/09 13:16	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		12/11/09 13:16	75-69-4	
Vinyl chloride	0.31 ug/L		0.20	1		12/11/09 13:16	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		12/11/09 13:16	1330-20-7	
cis-1,2-Dichloroethene	6.7 ug/L		1.0	1		12/11/09 13:16	156-59-2	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		12/11/09 13:16	10061-01-5	
m&p-Xylene	ND ug/L		2.0	1		12/11/09 13:16	1330-20-7	
o-Xylene	ND ug/L		1.0	1		12/11/09 13:16	95-47-6	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/11/09 13:16	156-60-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		12/11/09 13:16	10061-02-6	
4-Bromofluorobenzene (S)	95 %		80-120	1		12/11/09 13:16	460-00-4	
Dibromofluoromethane (S)	108 %		80-122	1		12/11/09 13:16	1888-53-7	
1,2-Dichloroethane-d4 (S)	108 %		80-124	1		12/11/09 13:16	17060-07-0	
Toluene-d8 (S)	105 %		80-123	1		12/11/09 13:16	2037-26-5	

Sample: TB	Lab ID: 252638005	Collected: 12/08/09 00:00	Received: 12/10/09 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
1,1,1-Trichloroethane	ND ug/L		1.0	1		12/11/09 11:54	71-55-6	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		12/11/09 11:54	79-34-5	
1,1,2-Trichloroethane	ND ug/L		1.0	1		12/11/09 11:54	79-00-5	
1,1-Dichloroethane	ND ug/L		1.0	1		12/11/09 11:54	75-34-3	

Date: 12/17/2009 12:56 PM

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Page 7 of 12



ANALYTICAL RESULTS

Project: 01344 - Blaine
Pace Project No.: 252638

Sample: TB	Lab ID: 252638005	Collected: 12/08/09 00:00	Received: 12/10/09 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
1,1-Dichloroethene	ND ug/L		1.0	1		12/11/09 11:54	75-35-4	
1,2-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 11:54	95-50-1	
1,2-Dichloroethane	ND ug/L		1.0	1		12/11/09 11:54	107-06-2	
1,2-Dichloropropane	ND ug/L		1.0	1		12/11/09 11:54	78-87-5	
1,3-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 11:54	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		12/11/09 11:54	106-46-7	
Benzene	ND ug/L		1.0	1		12/11/09 11:54	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		12/11/09 11:54	75-27-4	
Bromoform	ND ug/L		1.0	1		12/11/09 11:54	75-25-2	
Bromomethane	ND ug/L		1.0	1		12/11/09 11:54	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		12/11/09 11:54	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		12/11/09 11:54	108-90-7	
Chloroethane	ND ug/L		1.0	1		12/11/09 11:54	75-00-3	
Chloroform	ND ug/L		1.0	1		12/11/09 11:54	67-66-3	
Chloromethane	ND ug/L		1.0	1		12/11/09 11:54	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		12/11/09 11:54	124-48-1	
Ethylbenzene	ND ug/L		1.0	1		12/11/09 11:54	100-41-4	
Methyl-tert-butyl ether	ND ug/L		1.0	1		12/11/09 11:54	1634-04-4	
Methylene chloride	ND ug/L		4.0	1		12/11/09 11:54	75-09-2	
Tetrachloroethene	ND ug/L		1.0	1		12/11/09 11:54	127-18-4	
Toluene	ND ug/L		1.0	1		12/11/09 11:54	108-88-3	
Trichloroethene	ND ug/L		1.0	1		12/11/09 11:54	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		12/11/09 11:54	75-69-4	
Vinyl chloride	ND ug/L		0.20	1		12/11/09 11:54	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		12/11/09 11:54	1330-20-7	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		12/11/09 11:54	156-59-2	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		12/11/09 11:54	10061-01-5	
m&p-Xylene	ND ug/L		2.0	1		12/11/09 11:54	1330-20-7	
o-Xylene	ND ug/L		1.0	1		12/11/09 11:54	95-47-6	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		12/11/09 11:54	156-60-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		12/11/09 11:54	10061-02-6	
4-Bromofluorobenzene (S)	94 %		80-120	1		12/11/09 11:54	460-00-4	
Dibromofluoromethane (S)	110 %		80-122	1		12/11/09 11:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	112 %		80-124	1		12/11/09 11:54	17080-07-0	
Toluene-d8 (S)	105 %		80-123	1		12/11/09 11:54	2037-26-5	

Date: 12/17/2009 12:56 PM

REPORT OF LABORATORY ANALYSIS

Page 8 of 12

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



QUALITY CONTROL DATA

Project: 01344 - Blaine

Pace Project No.: 252638

QC Batch:	MSV/1786	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	252638001, 252638002, 252638003, 252638004, 252638005		

METHOD BLANK: 17183 Matrix: Water

Associated Lab Samples: 252638001, 252638002, 252638003, 252638004, 252638005

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
1,1,1-Trichloroethane	ug/L	ND	1.0	12/11/09 11:31	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/11/09 11:31	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/11/09 11:31	
1,1-Dichloroethane	ug/L	ND	1.0	12/11/09 11:31	
1,1-Dichloroethene	ug/L	ND	1.0	12/11/09 11:31	
1,2-Dichlorobenzene	ug/L	ND	1.0	12/11/09 11:31	
1,2-Dichloroethane	ug/L	ND	1.0	12/11/09 11:31	
1,2-Dichloropropane	ug/L	ND	1.0	12/11/09 11:31	
1,3-Dichlorobenzene	ug/L	ND	1.0	12/11/09 11:31	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/11/09 11:31	
Benzene	ug/L	ND	1.0	12/11/09 11:31	
Bromodichloromethane	ug/L	ND	1.0	12/11/09 11:31	
Bromoform	ug/L	ND	1.0	12/11/09 11:31	
Bromomethane	ug/L	ND	1.0	12/11/09 11:31	
Carbon tetrachloride	ug/L	ND	1.0	12/11/09 11:31	
Chlorobenzene	ug/L	ND	1.0	12/11/09 11:31	
Chloroethane	ug/L	ND	1.0	12/11/09 11:31	
Chloroform	ug/L	ND	1.0	12/11/09 11:31	
Chloromethane	ug/L	ND	1.0	12/11/09 11:31	
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/11/09 11:31	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/11/09 11:31	
Dibromochloromethane	ug/L	ND	1.0	12/11/09 11:31	
Ethylbenzene	ug/L	ND	1.0	12/11/09 11:31	
m&p-Xylene	ug/L	ND	2.0	12/11/09 11:31	
Methyl-tert-butyl ether	ug/L	ND	1.0	12/11/09 11:31	
Methylene chloride	ug/L	ND	4.0	12/11/09 11:31	
o-Xylene	ug/L	ND	1.0	12/11/09 11:31	
Tetrachloroethene	ug/L	ND	1.0	12/11/09 11:31	
Toluene	ug/L	ND	1.0	12/11/09 11:31	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/11/09 11:31	
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/11/09 11:31	
Trichloroethene	ug/L	ND	1.0	12/11/09 11:31	
Trichlorofluoromethane	ug/L	ND	1.0	12/11/09 11:31	
Vinyl chloride	ug/L	ND	0.20	12/11/09 11:31	
Xylene (Total)	ug/L	ND	3.0	12/11/09 11:31	
1,2-Dichloroethane-d4 (S)	%	112	80-124	12/11/09 11:31	
4-Bromofluorobenzene (S)	%	94	80-120	12/11/09 11:31	
Dibromofluoromethane (S)	%	110	80-122	12/11/09 11:31	
Toluene-d8 (S)	%	104	80-123	12/11/09 11:31	

Date: 12/17/2009 12:56 PM

REPORT OF LABORATORY ANALYSIS

Page 9 of 12

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



QUALITY CONTROL DATA

Project: 01344 - Blaine
Pace Project No.: 252638

Parameter	Units	17184		17185		% Rec	Limits	RPD	Max RPD	Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec					
1,1,1-Trichloroethane	ug/L	20	21.0	19.7	105	98	69-135	6	30	
1,1,2,2-Tetrachloroethane	ug/L	20	17.6	18.1	88	90	69-123	3	30	
1,1,2-Trichloroethane	ug/L	20	17.7	18.0	88	90	76-114	2	30	
1,1-Dichloroethane	ug/L	20	18.9	17.8	94	89	74-124	6	30	
1,1-Dichloroethene	ug/L	20	20.1	19.0	101	95	69-139	6	30	
1,2-Dichlorobenzene	ug/L	20	19.2	18.5	96	92	74-118	4	30	
1,2-Dichloroethane	ug/L	20	20.6	20.6	103	103	73-127	.1	30	
1,2-Dichloropropane	ug/L	20	18.5	18.3	92	91	72-126	1	30	
1,3-Dichlorobenzene	ug/L	20	19.4	19.1	97	96	73-119	1	30	
1,4-Dichlorobenzene	ug/L	20	19.1	19.1	95	95	73-115	.04	30	
Benzene	ug/L	20	20.0	19.4	100	97	75-124	3	30	
Bromodichloromethane	ug/L	20	18.3	17.7	92	89	77-126	3	30	
Bromoform	ug/L	20	18.0	17.6	90	88	61-131	2	30	
Bromomethane	ug/L	20	25.7	24.2	128	121	58-139	6	30	
Carbon tetrachloride	ug/L	20	21.8	20.4	109	102	67-136	7	30	
Chlorobenzene	ug/L	20	19.7	19.0	98	95	78-115	4	30	
Chloroethane	ug/L	20	23.5	22.0	118	110	58-137	7	30	
Chloroform	ug/L	20	20.4	19.6	102	98	75-124	4	30	
Chloromethane	ug/L	20	18.4	16.7	92	84	50-129	10	30	
cis-1,2-Dichloroethene	ug/L	20	21.5	20.7	107	103	78-126	4	30	
cis-1,3-Dichloropropene	ug/L	20	17.5	17.5	87	88	78-159	.3	30	
Dibromochloromethane	ug/L	20	18.7	19.0	94	95	81-125	1	30	
Ethylbenzene	ug/L	20	19.9	19.1	99	95	76-124	4	30	
m&p-Xylene	ug/L	40	42.2	40.0	106	100	75-124	5	30	
Methyl-tert-butyl ether	ug/L	20	18.2	17.5	91	88	72-130	4	30	
Methylene chloride	ug/L	20	19.3	18.4	97	92	69-124	5	30	
o-Xylene	ug/L	20	21.3	20.1	107	100	76-121	6	30	
Tetrachloroethene	ug/L	20	19.2	18.3	96	92	70-127	5	30	
Toluene	ug/L	20	20.0	18.9	100	95	75-124	5	30	
trans-1,2-Dichloroethene	ug/L	20	21.0	19.8	105	99	72-129	6	30	
trans-1,3-Dichloropropene	ug/L	20	14.2	14.4	71	72	69-122	1	30	
Trichloroethene	ug/L	20	18.4	17.7	92	89	78-124	4	30	
Trichlorofluoromethane	ug/L	20	27.2	25.6	136	128	60-147	6	30	
Vinyl chloride	ug/L	20	22.1	20.5	111	102	56-136	8	30	
Xylene (Total)	ug/L	60	63.5	60.1	106	100	76-123	6	30	
1,2-Dichloroethane-d4 (S)	%				109	110	80-124			
4-Bromofluorobenzene (S)	%				93	102	80-120			
Dibromofluoromethane (S)	%				110	108	80-122			
Toluene-d8 (S)	%				106	106	80-123			

Date: 12/17/2009 12:56 PM

REPORT OF LABORATORY ANALYSIS

Page 10 of 12

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



QUALIFIERS

Project: 01344 - Blaine
Pace Project No.: 252638

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-S Pace Analytical Services - Seattle

BATCH QUALIFIERS

Batch: MSV/1786

[1] LCS/LCSD were performed in lieu of an MS/MSD due to insufficient sample volume provided.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 01344 - Blaine
 Pace Project No.: 252638

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
252638001	MW-3	EPA 5030B/8260	MSV/1786		
252638002	MW-4	EPA 5030B/8260	MSV/1786		
252638003	MW-7	EPA 5030B/8260	MSV/1786		
252638004	MW-8	EPA 5030B/8260	MSV/1786		
252638005	TB	EPA 5030B/8260	MSV/1786		

Date: 12/17/2009 12:56 PM

REPORT OF LABORATORY ANALYSIS

Page 12 of 12

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc..

